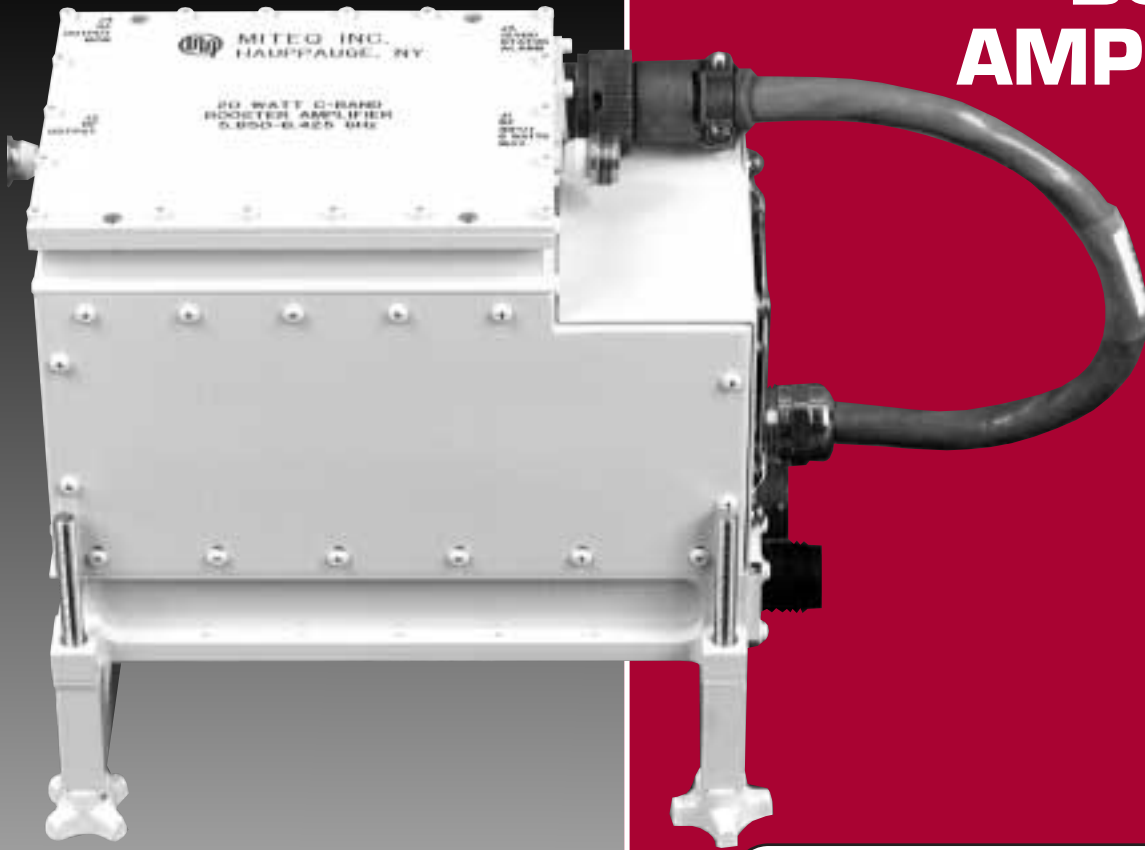




# SOLID STATE BOOSTER AMPLIFIERS



## 20 WATT C-BAND MODEL BA-5864-20

### FEATURES

- Over-temperature protection
- Temperature compensation
- Output RF DC detector
- Forced air cooling
- Field replaceable fans
- RF output monitor
- Mute control
- Amplifier current fault detection
- Weather resistant assembly
- Summary alarm
- CE compliant

Model Number	Frequency (GHz)	Output Power at 1 dB Compression (Watts/dBm)
BA-5864-10	5.850 – 6.425	10/40
BA-5864-20	5.850 – 6.425	20/43
BA-5864-25	5.850 – 6.425	25/43.98
BA-5864-30	5.850 – 6.425	30/40.77
BA-5864-35	5.850 – 6.425	35/45.44
BA-137145-8	13.75 – 14.5	8/39
BA-137145-16	13.75 – 14.5	16/42
BA-140145-8	14.0 – 14.5	8/39
BA-140145-16	14.0 – 14.5	16/42

The Booster Amplifiers are Class A linear Solid State Power Amplifiers (SSPA) designed to mount on the output of an existing lower power transceiver. Mounts are provided for easy outdoor installation on a typical 1" x 2" or 2" x 4" antenna boom.

## SPECIFICATIONS

### RF SPECIFICATIONS

Nondamage power input	
Below 7 GHz .....	+37 dBm (5 W) maximum
Above 7 GHz .....	+36 dBm (4 W) maximum
Gain (at center band)	
8 Watt models .....	14 ±1 dB
10 Watt models .....	20 ±1 dB
16 Watt models .....	18 ±1 dB
20 Watt models .....	20 ±1 dB
25 Watt models .....	19 ±1 dB
30 Watt models .....	19 ±1 dB
35 Watt models .....	19 ±1 dB
Gain flatness .....	0.6 dB/40 MHz, 1.0 dB peak-to-peak/RF band
Gain slope .....	0.2 dB/10 MHz maximum
Gain stability .....	3.5 dB maximum/-40 to +55°C
Out-of-band gain (14.0–14.5 GHz models only) .....	0 dB maximum (12.8–13.28 GHz)
Third order intermodulation .....	With 2 carriers, each 6 dB below rated P1 dB, 25 dBc maximum
Spurious outputs .....	60 dBc maximum relative to rated P1 dB
Noise figure .....	20 dB maximum
Receive band output power density (10.95–12.75 GHz) .....	-160 dBm/Hz maximum with input terminated (14.0–14.5 GHz models only)
VSWR	
Input .....	1.3:1 dB maximum
Output .....	1.5:1 dB maximum
Input/output impedance .....	50 ohms
Output RF monitor .....	-40 dBc nominal
Output DC detector .....	2.0 V minimum at rated power
Mute .....	60 dB typical

### PRIMARY POWER REQUIREMENTS

Voltage .....	90–250 VAC
Frequency .....	47–63 Hz
Power factor .....	99% typical
Power consumption	
Model BA-5864-10 .....	150 W typical
Model BA-5864-20, BA-137145-8, BA-140145-8 .....	190 W typical
Model BA-5864-25 .....	280 W typical
Model BA-5864-30 .....	300 W typical
Model BA-137145-16, BA-140145-16 .....	330 W typical
Model BA-5864-35 .....	340 W typical

### SUMMARY ALARM

Contact closure/open for DC voltage and/or amplifier alarm

### PHYSICAL

RF connector	
C-band .....	N female (CPR-229G optional)
Ku-band .....	WR-75 square plain with sealing groove (SMA female optional)
RF output monitor connector	
C-band .....	N female
Ku-band .....	SMA female
Power connector .....	FCI Clipper series CL1M1102 (mating connector supplied)
Summary alarm interface mating connector .....	MS3112E14-15S (mating connector supplied)
Weight .....	8–15 pounds typical

## GENERAL SPECIFICATIONS

### ENVIRONMENTAL

#### Operating

Ambient temperature .....	-40 to +55° C
Atmospheric pressure .....	Up to 15,000 feet with adiabatic derating at 1°C/1000 feet
Relative Humidity .....	Up to 100% including condensation and frost

#### Nonoperating

Temperature .....	-50 to +70°C
Atmospheric pressure .....	Up to 40,000 feet
Shock and Vibration.....	Normal handling by commercial carriers

## OPTIONS

### 1. 48 VDC prime power.

DC power input: 41–56 VDC

Power consumption

Model BA-5864-10: 110 W typical

Model BA-5864-20, Model BA-137145-8, Model BA-140145-8: 140 W typical

Model BA-137145-16, Model BA-140145-16: 230 W typical

Connector: MS3112E12-3P (mating connector MS3116F12-3S supplied)

Add /48 to model number

Example: BA-5864-20 becomes BA-5864-20/48

### 2. Input connector.

**A.** CPR-229G (C-band models).

**B.** Type SMA female (Ku-band models).

### 3. Output connector.

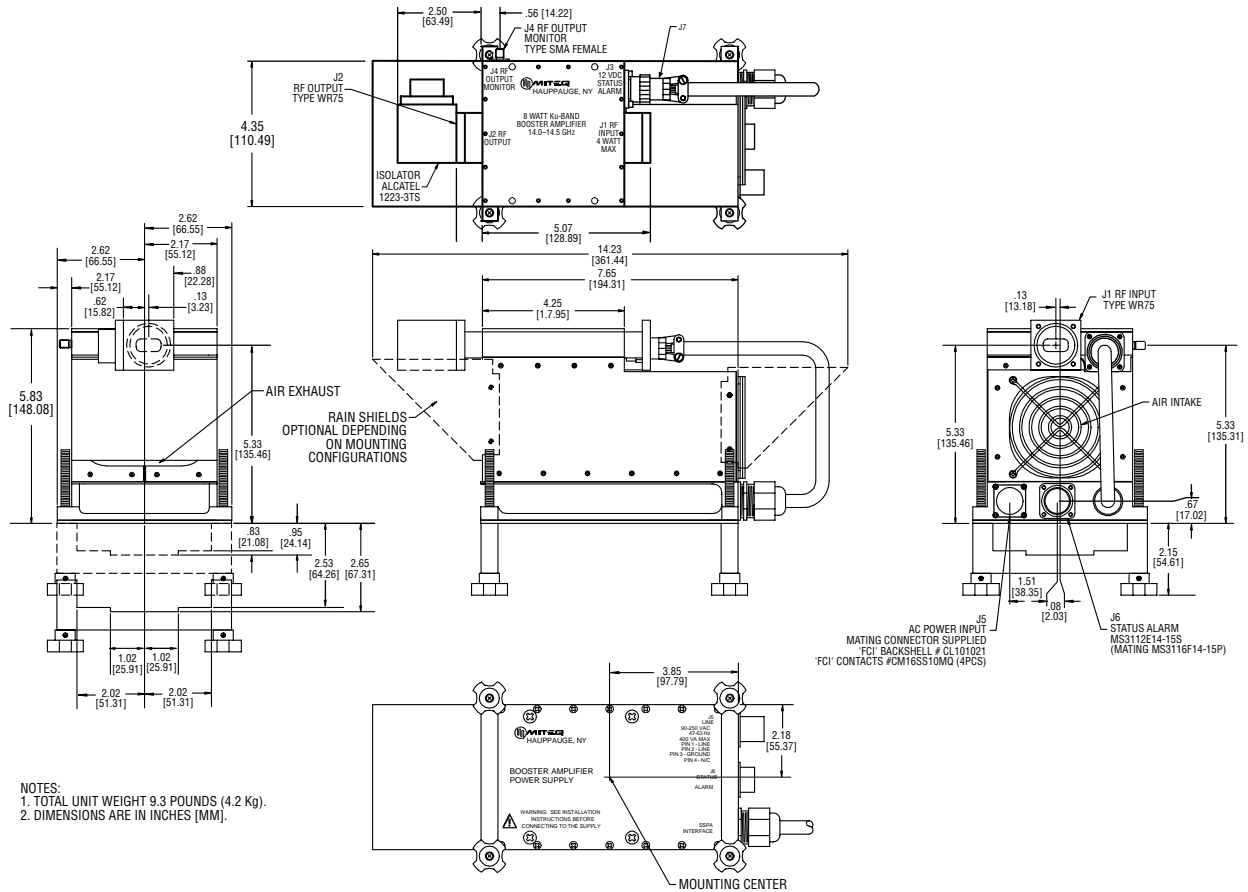
**A.** CPR-229G (C-band models).

**B.** Type SMA female (Ku-band models).

Note: Missing option numbers are not applicable to this product.

# SOLID STATE BOOSTER AMPLIFIERS

## OUTLINE DRAWING



**8 WATT Ku-BAND  
MODEL BA-140145-8**



100 Davids Drive, Hauppauge, NY 11788  
 TEL.: (631) 436-7400 • FAX: (631) 436-7431/436-7430  
 www.miteq.com